



Availability of basic amenities among poor households in Himachal Pradesh: A cross sectional study

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ABSTRACT

Although India is way towards to meet its Millennium Development Goal for providing access to safe drinking water and sanitation, thus remains a worrying discrepancy in access between urban and rural areas. In 2006, 96% of the urban population versus 86% of the rural population obtained their drinking water from an improved water source. Poverty is “pronounced deprivation in well-being.” The wellbeing primarily linked to commodities, so the poor are those who do not have enough income or consumption to keep them above some adequate minimum threshold level. Poor household is defined as the position where household is deprived of minimum requirement of standard of living. Poverty is a major rural phenomenon, as majority of poor live in rural areas. Rural peoples regularly face geographically disadvantage, being in rural area where the access to basic amenities is inadequate. Majority of poor households found deprived in rural areas as urban areas due to lack of adequate resources. Access to basic amenities found very low due to lacking of government policies, infrastructure and awareness of ongoing programs and campaign on rural development activity. The objective is based on availability of basic amenities among poor households and to find the coverage of basic amenities among characteristics of households in Himachal Pradesh. The present study is based on data collected on the basis of basic household amenities such as decent house, sanitation, drinking water, cooking fuel, and drainage in rural poor houses in Himachal Pradesh and data extracted from the study conducted by NSSO, Government of India. Two-stages sampling were for data collection in all states of India. First stage sampling includes the selection of census village in the rural areas and urban frame survey block in the urban sector. Second stage include household was selected by using random sampling. Survey covered 65,932 households and 333,104 persons were interviewed all over 36 states of India. Study covered 896 households in Himachal Pradesh including 757 non-poor households and 159 poor households. The study result revealed that Average Household consumer expenditure and Average Monthly Household consumer expenditure found Rs. 5160 and Rs. 862 and also average family size found 6 in poor households in Himachal Pradesh. septic tank/flush system (61.9%), open kutcha (37.4%), Tap(88.5%) and firewood and chips (77.0%) was the main source of Latrine, Drainage system, drinking source and cooking fuel in poor households in Himachal Pradesh. Other house type and Sikhism, Non- schedule cast and family size with one & two member family shows more availability of latrine. Casual labour in non-agriculture house (93.5%),Sikhism (100%) SC(81%) and more than three member family (79.5%) have Firewood and chips where as Self-employed in non-agriculture (48.1%), other categories



of religion (80%) and non SC(20.3%) and family with one member (75%) have LPG as sources of cooking in poor houses

Keywords: *Average household monthly consumption expenditure, Availability of types of house, Basic household's amenities, Drainage system, Monthly per-capita expenditure*

LINTRODUCTION

Poverty is “pronounced deprivation in well-being.” The wellbeing primarily links to commodities, so the poor are those who do not have sufficient income or consumption above some adequate minimum threshold. This view sees poverty largely in monetary terms. Poverty may also be tied to a specific type of consumption, so we can, people could be house poor or food poor or health poor. The broadest approach to well-being (and poverty) generally focuses on the capacity of the individual. Poor people often lack key capabilities; they may have inadequate income or education, or be in poor health, or feel powerless, or lack political freedoms or less access to basic amenities. The provision of basic services such as piped water, cooking fuel, sanitation systems, and electricity has been an important goal of Indian developmental planning. Households assets and amenities reflected the quality of life. Electric lights enable more reading and education; new fuels and improved stoves provide a cleaner environment and better health; clean water and sanitation reduce the prevalence of gastrointestinal diseases. Access to piped water and use of kerosene or liquefied petroleum gas (LPG) for cooking reduces the time women spend in water and fuel collection. Access to basic amenities like improve drinking water [1] and improve sanitation [2] is not only for measure of socio-economic status of the household, but also a fundamental right of the people for good health. Insufficient and lack of poor quality of drinking water not only resulted in increase sickness and deaths, but also increase health costs, low worker productivity and also effect the school enrolment of Childrens [3]. Definitions of improved drinking water sources and sanitation facilities showed inter and intra variation among countries and areas; Joint Monitoring Programme (JMP) [4]. Inequitable access to water and sanitation is the product of disparities in fresh water resources, income, power and institutional capacity between and within countries. Disparity in access to and use of water, and share in beneficial public expenditure in water sector, can be understood in at least four overlapping connotations [5]. There are considerable variations between large urban centres, small towns and cities in piped water supply and sanitation services in India [6-7]. According to Joint Monitoring Programme for water and sanitation, globally 2.3 billion people suffering from lack access to basic amenities (Improved water and sanitation) and 893 million people still practise open defecation [8]. In 2012, it was estimated that 280,000 peoples including children under five years old, died from diarrhoea cause by lack of basic sanitation [9]. These deaths can be prevented by using improving access to safely managed sanitation [10]. Safely managed sanitation refers to the use of improved sanitation facilities that are not shared with other households and where urine safely disposed or transported and treated off-site [8]. Two important programs launched in the year 2005 by the Government of India that have contributed to development in rural and urban areas are the Bharat Nirman and the Jawaharlal Nehru National Urban Renewal Mission (JnNURM) respectively. There are also various other



schemes functioning at the sub-national levels for the provision of various basic amenities. Under Bharat Nirman, various schemes (for improving the access to basic amenities in rural areas with special provisions for poor, excluded and marginalised groups), such as rural housing (Indira Awaas Yojana), rural drinking water supply (National Rural Drinking Water Programme under Rajiv Gandhi National Drinking Water Mission), Total Sanitation Campaign (which has been renamed Nirmal Bharat Abhiyan in May 2012 by the Ministry of Drinking Water and Sanitation), rural electrification (Rajiv Gandhi Grameen Vidyutikaran Yojana) among others, are functioning. A landmark initiative was the launch of Provision of Urban Amenities to Rural Areas (PURA) in 2004. In India, 82.7 percent rural and 91.4 percent urban populations having sustainable access to safe drinking water [11]. As per the 2011 Census of India, Rural India have 16.78 crores households in that 69.3% household don't have latrine facility within the household premises including with all states. 46.9% of the households having latrine facilities within the household's premises. 21.9% in rural area and 81.4% in urban area have been latrine facilities within the household's premises [11].

Objective:

1. To assess the availability of basic amenities among poor households in Himachal Pradesh.
2. To find the coverage of basic amenities among characteristics of poor households in Himachal Pradesh.

Study design

The present study is based on secondary data source collected by the National Sample Survey Organisation (NSSO-2014), India and data is extracted 139 for poor households in Himachal Pradesh.

Data source

The data based on basic households amenities and characteristics in different states of India and unit level data was extracted from the 25th schedule of the 71st round of the cross-sectional collected by the National Sample Survey Organization (NSSO) on 'Health' and 'Education'. NSSO is a national organisation under the Ministry of Statistics In India. The data was collected in all states of India from January to June 2014.

Methodology

Stratified two-stage sampling design was used for data collection. First stage sampling based on the selection of census village in the rural areas and urban frame survey blocks in the urban sector. In second stage, household was selected by using random sampling. Survey covered total of 4577 villages and 3720 urban blocks surveyed from which 36,480 and 29,452 households were sampled in rural and urban areas respectively. Survey covered 65,932 households and 333,104 persons were interviewed all over 36 states of India. Total 896 households were covered in Himachal Pradesh including 757 non-poor households and 139 poor households. The face-to-face interviews were conducted using an interview schedule, on households characteristics, Individual characteristics, morbidity (self-reported), utilization of health care services (including types) and household expenditure on health care.

Data analysis

Data was analysed using SPSS version 21.0 for analysis (SPSS Inc. SPSS Statistics for Windows, Version 21.0. Chicago). Based on per capita monthly expenditure, all over households is divided in poor and non poor categories using poverty cut of urban (Rs.1000) and rural (Rs.816) area respectively [12].



Result

Households report average Household consumer expenditure (Rs.5160), Monthly per-capita expenditure (Rs. 862) and average family size was 6 respectively.

Average Household consumer expenditure and type of Houses

Maximum average of poor households found in other type of houses (Rs.7000) followed by Self-employed in non-agriculture (Rs.5226), Self-employed in agriculture (Rs.5188), Regular wage/salary earning (Rs.4912) and Casual labour in non-agriculture (Rs. 5034) respectively. Similarly, maximum percapita consumer expenditure in other type of house (Rs.1133), self-employed in non-agriculture (Rs.945), regular wage/salary earning (Rs.908), self-employed in agriculture (Rs.822) and , casual labour in non-agriculture (Rs. 810) respectively. (Table1)

Average Household consumer expenditure and Religion

Sikhism (Rs.7500) reported maximum average expenditure followed by Christianity (Rs.6250), Islam (Rs.5618), Hinduism (Rs.5225) and Other (Rs.3378) respectively. Similarly, per-capita average expenditure was found for Sikhism (Rs.750), Christianity (Rs.893), Islam (Rs.786), Hinduism (Rs.860) and Other (Rs.997) respectively. (Table1)

Average Household consumer expenditure and Social group

Schedule Caste (SC) poor households report average expenditure (Rs.5228) and Non Schedule Caste (Rs. 5158) whereas per-capita average expenditure found SC (Rs.817) and Non-SC (Rs.870) respectively and average family size for both was 6. (Table1)

Average Household consumer expenditure and Family size

Household having more than 3 in family have average expenditure (Rs. 5462) followed by three members (Rs.3223), two members (Rs.1695) and one member (Rs. 988) respectively (Table1).

Table 1: Average Household consumer expenditure (Rs.), Amount of medical insurance premium (Rs.), Average Monthly Household usual consumer expenditure (Rs.) and Average Household size among poor household's characteristics in Himachal Pradesh

		Average Household consumer expenditure (Rs.)	Average Monthly Household consumer expenditure (Rs.)	Average Household size
Overall		5160	862	6
Household type	Self-employed	5188	822	6
	Self-employed in non-agriculture	5226	945	6



	Regular wage/salary earning	4912	908	5
	Casual labour in non-agriculture	5034	810	6
	Other	7000	1133	7
Religion	Hinduism	5225	860	6
	Islam	5618	786	7
	Christianity	6250	893	7
	Sikhism	7500	750	10
	Other	3378	997	4
Social Group	Schedule Caste	5228	817	6
	Non Schedule Caste	5148	870	6
Family Size	One Member	988	988	-
	Two member	1695	848	-
	Three member	3223	1074	-
	More than Three members	5462	852	-

Overall poor households shows major source of latrine as septic tank/ flush system (61.9%), Service latrine (2.2%), Pit (10.1%) and (0.7%) other whereas 25.2% houses do not have latrine. According to households type; Self-employed houses shows as septic tank/ flush system (62.1%), Service latrine (5.2%), Pit (12.1%) whereas 20.7% houses do not have latrine. Self-employed in non-agriculture houses shows septic tank/ flush system (77.8%) and Pit (3.7%) whereas 14.8% do not have latrine in houses. Regular wage/salary earning houses shows septic tank/ flush system (55.0%) and whereas 25.2% houses do not have latrine. Casual labour in non-agriculture houses shows septic tank/ flush system (48.4%), Pit (19.4%) and whereas 32.3% houses do not have latrine. Other poor houses showed 100% septic tank/ flush system source of latrine (Table 2). Hinduism shows latrine sources as septic tank/ flush system (62.4%), Service latrine (1.7%), Pit (10.3%) and other (0.9%), whereas 24.8% houses do not have latrine. Islam shows latrine sources as septic tank/ flush system (36.4%), Service latrine (9.1%), Pit (9.1%) whereas 45.5% house do not have latrine. Sikhism shows 100% septic tank/ flush system as a main source. Other shows latrine sources as septic tank/ flush system (80%) and Pit (10%) whereas 10% houses do not have latrine in their houses. Based on social group; Schedule caste shows latrine sources as septic tank/ flush system (42.9%), Service latrine (4.8%), Pit (19.0%) and other (4.8%) whereas 28.6% houses do not have latrine. Non-Schedule caste show latrine sources as septic tank/ flush system (65.3%), Service latrine (1.7%), Pit (19%) and other (8.5%) whereas 24.6% houses do not have latrine. Based on family size; One family member shows 75% septic tank/ flush system as a source of latrine whereas 25% do not have latrine in house. Two members family shows 75% septic tank/ flush system as a source of latrine whereas 25% do not have latrine in house. Three members shows 75% septic tank/ flush system and Service latrine (25%) as a



source of latrine. More than three members shows septic tank/ flush system(60.6%), Service latrine(1.6%), Pit(11.0%) and other (0.8%) as a source of latrine whereas 25 % do not have latrine in house.(Table 2)

Table 2: Availability of type of latrine among poor household's characteristics in Himachal Pradesh

		Service latrine	Pit	septic tank/ flush system	No Latrine	others
Overall		2.2	10.1	61.9	25.2	0.7
Household type	Self-employed	5.2	12.1	62.1	20.7	0.0
	Self-employed in non-agriculture	0.0	3.7	77.8	14.8	3.7
	Regular wage/salary earning	0.0	0.0	55.0	45.0	0.0
	Casual labour in non-agriculture	0.0	19.4	48.4	32.3	0.0
	Other	0.0	0.0	100.0	0.0	0.0
Religion	Hinduism	1.7	10.3	62.4	24.8	0.9
	Islam	9.1	9.1	36.4	45.5	0.0
	Sikhism	0.0	0.0	100.0	0.0	0.0
	Other	0.0	10.0	80.0	10.0	0.0
Social Group	SC	4.8	19.0	42.9	28.6	4.8
	Non SC	1.7	8.5	65.3	24.6	0.0
family size	One Member	0.0	0.0	75.0	25.0	0.0
	Two member	0.0	0.0	75.0	25.0	0.0
	Three member	25.0	0.0	75.0	0.0	0.0
	More than Three members	1.6	11.0	60.6	26.0	0.8

Overall poor households shows availability of drainage sources as open kutchra (37.4%), open pucca (16.5%), covered pucca (8.6%), underground (5.0%) and whereas 32.4% houses do not drainage system in Himachal Pradesh. According to households type; Self-employed houses shows as open kutchra (44.8%), open pucca (17.2%), covered pucca (6.9%), underground (6.9%) and whereas 24.1% houses do not drainage system. Self-employed in non-agriculture houses shows as open kutchra (30.0%), open pucca (5%), covered pucca (10%), underground (10.0%) and whereas 45% houses do not drainage system. Regular wage/salary earning houses shows as open kutchra (38.7%), open pucca (6.5%), covered pucca (6.5%) and whereas 48.4% houses do not drainage system. Other poor houses shows as open kutchra (33.3%), open pucca (33.3%), covered pucca (33.3%) respectively. Based on Religion; Hinduism shows as open kutchra (36.8%), open pucca (12.8%), covered pucca (9.4%), underground (5.1%) and whereas 35.9% houses do not drainage system. Islam shows latrine sources as



open kutcha (54.5%), covered pucca (9.1%), underground (9.1%) and whereas 27.3% houses do not drainage system. Sikhism shows 100% open pucca drainage system in houses and other shows as open kutcha (30%), open pucca (70%). Based on social group; Schedule caste shows as open kutcha (47.6%), open pucca (9.5%), underground (4.8%) and whereas 38.1% houses do not drainage system. Non-Schedule caste shows as open kutcha (35.6%), open pucca (17.8%), covered pucca (10.2%), underground (5.1%) and whereas 31.4% houses do not drainage system. Based on family size; One family member shows as open kutcha (25.0%) and open pucca (75%). Two members family shows as open kutcha (75%) and open pucca (25%) respectively. Three members showed as open pucca (25%) and underground (25%) and whereas 50% houses do not drainage system. More than Three members shows as open kutcha (37.8%), open pucca (14.2%), covered pucca (9.4%) and underground (4.7%) and whereas 33.9% houses do not drainage system.(Table3)

Table 3: Availability of drainage sources among poor households characteristics in Himachal Pradesh

		Open kutcha	Open pucca	Covered pucca	Underground	No drainage
Overall		37.4	16.5	8.6	5.0	32.4
Household type	Self-employed	44.8	17.2	6.9	6.9	24.1
	Self-employed in non-agriculture	25.9	33.3	11.1	3.7	25.9
	Regular wage/salary earning	30.0	5.0	10.0	10.0	45.0
	Casual labour in non-agriculture	38.7	6.5	6.5	0.0	48.4
	Other	33.3	33.3	33.3	0.0	0.0
Religion	Hinduism	36.8	12.8	9.4	5.1	35.9
	Islam	54.5	0.0	9.1	9.1	27.3
	Sikhism	0.0	100.0	0.0	0.0	0.0
	Other	30.0	70.0	0.0	0.0	0.0
Social Group	SC	47.6	9.5	0.0	4.8	38.1
	Non SC	35.6	17.8	10.2	5.1	31.4
Family size	One Member	25.0	75.0	0.0	0.0	0.0
	Two member	75.0	25.0	0.0	0.0	0.0
	Three member	0.0	25.0	0.0	25.0	50.0
	More than Three members	37.8	14.2	9.4	4.7	33.9



Overall poor households show availability of water source as Tap (88.5%), Tube-well/hand pump (2.2%), Tankers (0.7%), Pucca well (3.6%) and other (5.0%) respectively. According to households type; Self-employed houses shows as Tap (91.4%), Pucca well (1.7%) and others (5.2%) respectively. Self-employed in non-agriculture houses shows water sources as Tap (88.9%), Pucca well (3.7%) and other (7.4%) respectively. Regular wage/salary earning houses shows as Tap (95%) and other (5.0%) whereas other poor houses shows 100% Tap as water source. Based on Religion; Hinduism shows as availability of water source as Tap (87.2%), Tube-well/hand pump (2.6%), Pucca well (4.3%) and other (5.0%). Islam shows water source as Tap (90.9%) and Tankers and Sikhism as well as other categories shows 100% Tap as water source in houses. Based on social group; Schedule caste shows as Tap (76.2%), Tankers (4.8%), Pucca well (4.8%) and other (14.3%) and whereas Non-Schedule caste shows as Tap (90.7%) and Tube-well/hand pump (2.5%) respectively. Based on family size; One member, Two members and three member family shows 100 % Tap as water sources whereas Tap (87.4%), Tube-well/hand pump (2.4%), Tankers (0.8%), Pucca well (3.9%) and other (5.5%) respectively. (Table 4)

Table 4: Availability of source of drinking water among poor households characteristics in Himachal Pradesh

		Tap	Tube-well/hand pump	Tankers	Pucca well	Others
Overall		88.5	2.2	0.7	3.6	5.0
Household type	Self-employed	91.4	0.0	1.7	1.7	5.2
	Self-employed in non-agriculture	88.9	0.0	0.0	3.7	7.4
	Regular wage/salary earning	95.0	0.0	0.0	0.0	5.0
	Casual labour in non-agriculture	77.4	9.7	0.0	9.7	3.2
	Other	100.0	0.0	0.0	0.0	0.0
Religion	Hinduism	87.2	2.6	0.0	4.3	6.0
	Islam	90.9	0.0	9.1	0.0	0.0
	Sikhism	100.0	0.0	0.0	0.0	0.0
	Other	100.0	0.0	0.0	0.0	0.0
Social Group	SC	76.2	0.0	4.8	4.8	14.3
	Non SC	90.7	2.5	0.0	3.4	3.4
Family size	One Member	100.0	0.0	0.0	0.0	0.0
	Two member	100.0	0.0	0.0	0.0	0.0
	Three member	100.0	0.0	0.0	0.0	0.0
	More than Three members	87.4	2.4	0.8	3.9	5.5



Overall poor households show availability of fuel sources as Firewood and chips (77%), LPG (20.1%), Dung cake (0.7%), Charcoal (0.7%) and Kerosene (1.4%) respectively. According to households type; Self-employed houses shows as Firewood and chips (79.3%) and LPG (19.0%) and charcoal(1.7%, Self-employed in non-agriculture houses shows Firewood and chips (80%), LPG (15%) and Kerosene (5%), Casual labour in non-agriculture shows as as Firewood and chips (93.5%), Dung cake (3.2%) and Kerosene (3.2%), Regular wage/salary earning houses shows as Firewood and chips (80%), LPG (15%) and Kerosene (5%), other (5%), other houses shows as Firewood and chips (66.7%) and LPG (33.3 respectively. Based on Religion; Hinduism shows as availability of cooking fuel as Firewood and chips (81.2%), LPG (16.2%), Dung cake (0.9%), Charcoal (0.9%) and Kerosene (0.9%), Islam shows fuel sources Firewood and chips (81.8%), LPG (9.1%) and Kerosene (9.1%), Sikhism shows 100% Firewood and chips as source and other categories shows Firewood and chips (20%) and LPG(80%) source of fuel. Based on social group; Schedule caste shows as Firewood and chips (81%), LPG (191%) and whereas Non-Schedule caste shows as Firewood and chips (76.3%), LPG (20.3%), Dung cake (0.8%), Charcoal (0.8%) and Kerosene (1.7%) respectively. Based on family size; One member shows as Firewood and chips (25%), and LPG (75%), Two members shows as Firewood and chips (75%) and LPG (25%), and three member family shows as Firewood and chips (50.3%), and LPG (50%), More than 3 member shows as Firewood and chips (79.5%), LPG (17.3%), Dung cake (0.8%), Charcoal (0.8%) and Kerosene (1.8%).(Table5)

Table 5: Availability of type of cooking source among non-poor and poor households characteristics in Himachal Pradesh

		Firewood and chips	LPG	Dung cake	Charcoal	Kerosene
Overall		77.0	20.1	0.7	0.7	1.4
Household type	Self-employed	79.3	19.0	0.0	1.7	0.0
	Self-employed in non-agriculture	51.9	48.1	0.0	0.0	0.0
	Regular wage/salary earning	80.0	15.0	0.0	0.0	5.0
	Casual labour in non-agriculture	93.5	0.0	3.2	0.0	3.2
	Other	66.7	33.3	0.0	0.0	0.0
Religion	Hinduism	81.2	16.2	0.9	0.9	0.9
	Islam	81.8	9.1	0.0	0.0	9.1
	Sikhism	100.0	0.0	0.0	0.0	0.0
	Other	20.0	80.0	0.0	0.0	0.0
Social Group	SC	81.0	19.0	0.0	0.0	0.0



	Non SC	76.3	20.3	0.8	0.8	1.7
Family size	One Member	25.0	75.0	0.0	0.0	0.0
	Two member	75.0	25.0	0.0	0.0	0.0
	Three member	50.0	50.0	0.0	0.0	0.0
	More than Three members	79.5	17.3	0.8	0.8	1.6

Different house type shows availability of improve sanitation as Self-employed (74.2%), Self-employed in non-agriculture (81.5%), Regular wage/salary earning (55%), Casual labour in non-agriculture (67.8%) and other (100%), Religionwise; Hinduism (72.7%), Islam (45.5%), Sikhism (100%) and Other (90%), social group wise; SC(61.9%) and Non SC (73.8%) whereas Family memberwise; One member (75%), Two members (75%), Three Member (75%) and More than three members (71.6%) shows improve saniataion in poor household in Himachal Pradesh.(Fig.1)

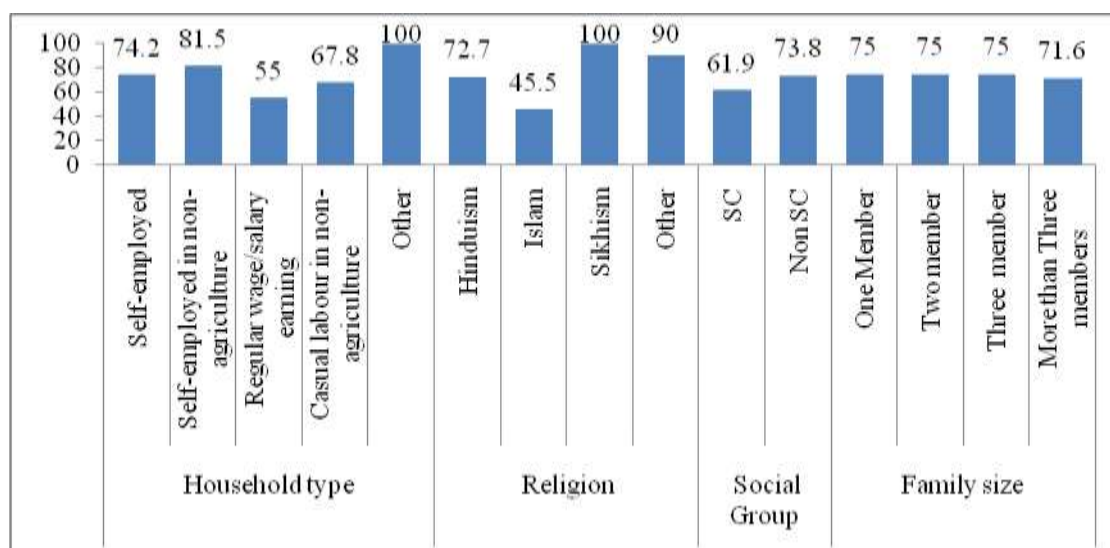


Fig 1: Availability of Improve sanitation in poor households

Different house type shows availability of drainage system as Self-employed (75.9%), Self-employed in non-agriculture (74.1%), Regular wage/salary earning (55%), Casual labour in non-agriculture (51.6%) and other (100%), Religionwise; Hinduism (64.1%), Islam (72.7%), Sikhism (100%) and Other (100%), social group wise; SC (61.9%) and Non SC (68.6%) whereas Family memberwise; One member (100%), Two members (100%), Three Member (50%) and More than three members (66.1%) shows availability of drainge in poor household in Himachal Pradesh.(Fig.2)

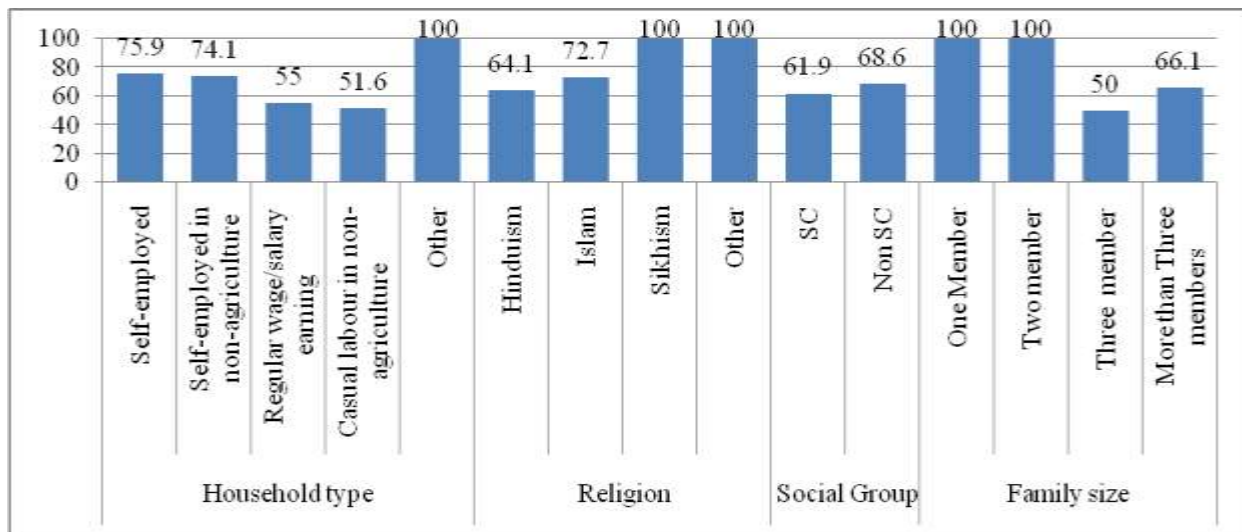


Fig 2: Availability of drainage in poor households

Different house type shows availability of improve water as Self-employed (91.4%), Self-employed in non-agriculture (88.9%), Regular wage/salary earning (95%), Casual labour in non-agriculture (87.1%) and other (100%), Religionwise; Hinduism (89.8%), Islam (90.9%), Sikhism (100%) and Other (100%), social group wise; SC(76.2%) and Non SC (93.2%) whereas Family memberwise; One member (100%), Two members (100%), Three Member (100%) and More than three members (89.8%) shows availability of improve water in poor household in Himachal Pradesh.(Fig.3)

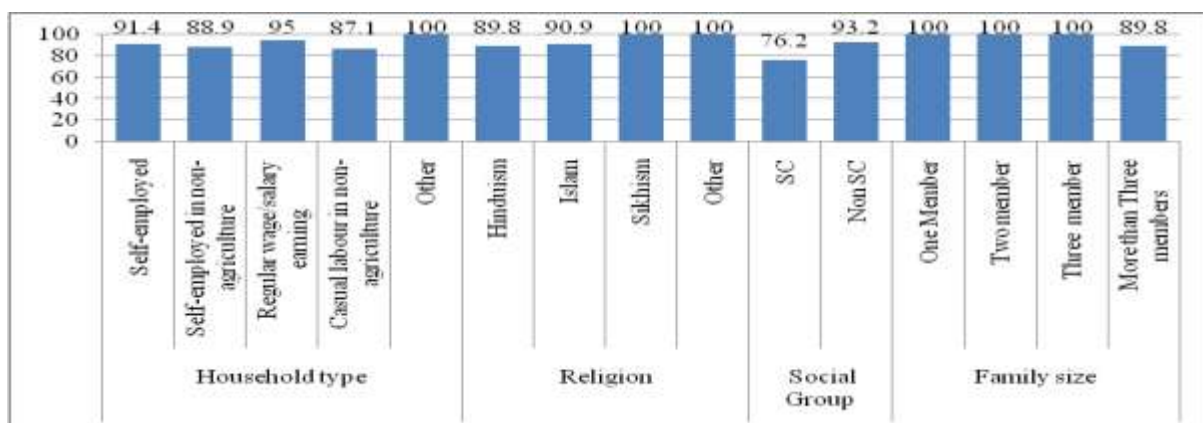


Fig 3: Availability of Improve drinking source in poor households

Different house type shows availability of improve cooking fuel as Self-employed (19%), Self-employed in non-agriculture (48.1%), Regular wage/salary earning (15%), and other (33.3%), Religionwise; Hinduism (16.2%), Islam (9.1%), and Other (80%), social group wise; SC(19%) and Non SC (20.3%) whereas Family memberwise; One member (75%), Two members (25%), Three Member (50%) and More than three members (17.3%) shows availability of improve cooking fuel in poor household in Himachal Pradesh.(Fig.4)

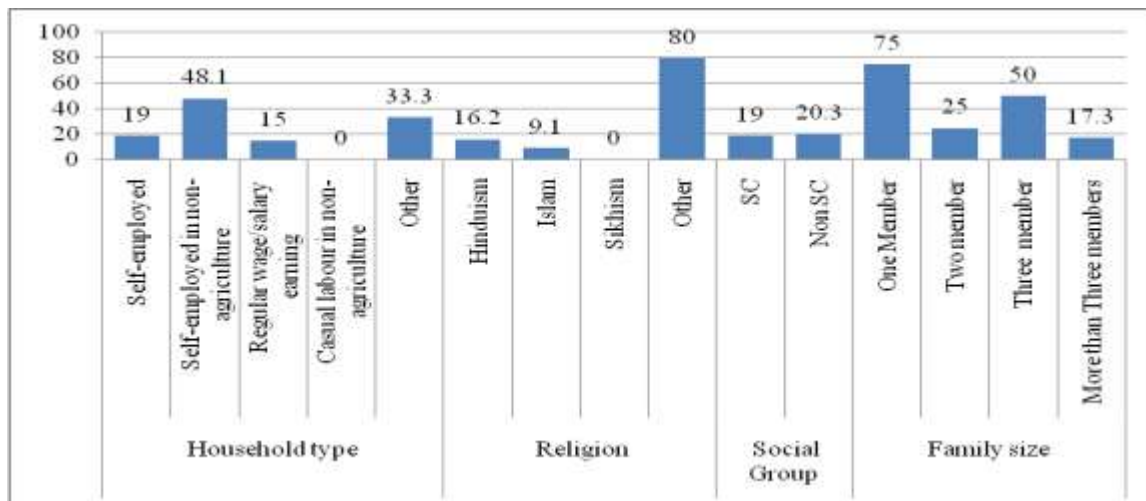


Fig 4: Availability of Improve cooking source in poor households

II.DISCUSSION

The present article based on basic households amenities namely access to toilet facilities, safe drinking water drainage system and cooking fuel in poor rural houses in Himachal Pradesh. Secondary data set based on NSSO-2014 used for analysis purposed. The analysis focuses on availability of basic amenities among the characteristics of households (House Type, Religion, social group and family size) to see the deprivation among poor households. Overall average households consumption expenditure among poor was Rs.5160 and where as Average Monthly Household consumer expenditure was Rs. 862. Among characteristics, other house categories, Sikhism religion, schedule caste and more than three members households showed more average households consumption expenditure. Study reveals that Pit (10.1%) and septic tank/ flush system (61.9%) were the main source in poor households. Other house type and Sikhism, Non- schedule cast and family size with one & two member family shows more availability of latrine. According to DLHS3, Pit latrine was 5% in total where as rural (4.7%) and Urban (8.1%) and flush latrine overall (49.2%) where as Rural (46.5%) and urban (79%) respectively. According to NFHS-4, Pit latrine was 0.7% in total where as rural (0.8%) and Urban (0.4%) and flush latrine/Pour flush to pipe sewer system overall (70%) where as Rural (68.9%) and urban (78.7%) respectively. Open defecation or no latrine facility was found 25.2% in poor houses. Absence of a toilet facility is generally linked to a lower socioeconomic status (based on household assets, housing conditions, etc.) [13]. Hindu households having lowest coverage of sanitation facilities in comparison to other religions (Sikhism and other) [14]. Poverty is higher among these castes, which could be another potential reason for poorer sanitation coverage among SC, ST, and OBCs [15]. Significant caste based differences persist in sanitation coverage. Scheduled tribe (ST) households continue to have the lowest ownership of toilets, increasing from only 12.4% in 1992–1993 to 17.8% in 2005–2006. However, the scheduled caste (SC) and other caste households progressed much more rapidly during the same period [16]. While household sanitation coverage was very similar between SC and ST households in 1992–1993 (13.5% and 12.4%, respectively), the difference widened to 14 percentage points in 2005 (32% for SC households and 17.8% for ST households), mainly due to better SC



progress. The poor section area had very low coverage in 1992–1993 (1%) and improved only modestly to 4.5% by 2005–2006. Hindu households have the lowest sanitation coverage, followed by Muslim households [16]. Maximum open defecation found in Regular wage/salary earning house (45%), Islam religion (45.5%), Scheduled caste (28.6%) and family with more than 3 members (26%) have more open defecation in their house. Open defecation [18] was found 44.1% overall whereas rural (47.1%) and urban (1.8%) whereas open defecation (14.3%), rural (4.0%) and urban (4.0%) respectively [17]. District Chamba (31.2%) and Kangra (33.5%) districts have very low toilet facility whereas Mandi (75.2%) and Hamirpur (70.2%) showed more toilet facility [17]. Majority of households have open kutchra drainage system (37.4%) and 32.4% houses do not have drainage. Overall, 8% of households had access to underground drainage systems in 2005–2006; 47% had no access to any drainage system; 17% had access to open kutchra (mud drainage with no concrete lining); 19% had access to open pucca (channels with concrete lining) drainage systems; and 8% had access to covered cement drainage systems. In rural areas, 60% of households had no access to drainage systems compared to 15% in urban areas [16]. Majority of houses have Tap (88.5%) as a main source of water. Tap water shows significant increase in all characteristics of household. Overall average was Pipe water (68.1%), rural (66.3%) and urban (82.5%) was the main source of drinking water [18]. According to DLHS3; Pipe water (45.2%), rural (42.3%) and urban (77.2%) was the main sources of drinking water. All districts of Himachal Pradesh have availability of drinking water significantly higher more than 90% [17]. Majority of houses have Firewood and chips (77%) and LPG (20.1%) as a main source of cooking. Casual labour in non-agriculture house (93.5%), Sikhism (100%) SC (81%) and more than three member family (79.5%) have Firewood and chips whereas Self-employed in non-agriculture (48.1%), other categories of religion (80%) and non SC (20.3%) and family with one member (75%) have LPG as sources of cooking in poor houses. Overall state (24.6%), Rural (19.6%) and urban (78.5%) showed LPG as source of cooking whereas electricity (0.3%) showed same for urban as well as rural area of Himachal Pradesh [17]. According to NFHS-3; Overall state (35.1%), Rural (28.9%) and urban (83.6%) showed LPG as source of cooking whereas overall average for electricity (1.4%), rural (1%) and urban (5.1%) showed source of cooking in Himachal Pradesh.

III. CONCLUSION

Household assets and amenities reflect a household's quality of life. Provision of electricity, clean drinking water, road condition, sanitary condition, health and hygiene, accessibility to cleaner fuel and smokeless stove for domestic use in households determines the overall development of a region. Availability of latrine and drinking sources showed significant increasing in Himachal Pradesh, whether poor as well as non-poor households. Firewood and chips was the main source of cooking fuel. LPG showed minimum source of cooking fuel. Government policy and campaign might show the impact on sanitation and water supply. In Himachal Pradesh, mostly are hilly areas and availability of easy finding of firewood and chips make households to use as a source of cooking. Non-availability and high cost of LPG make household deprived. High income households may get LPG easy manner as compared to low income households. Government should make clear policy to reducing the cost of LPG, so that economic burden on poor households is reduced and they can easily avail LPG cooking sources in their houses.



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Competing interests

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Consent for publication

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REFERENCE

1. T. B Arya, Water and Sanitation in U.P., Fresh Water Action Network for South Asia (FANSA), 2009.
2. P. Bajpai, L. Bhandari, Ensuring Access to Water in Urban Households, Economic and Political Weekly, Vol. 36, No.39,2001.
3. M. Haq et. Al, Household's Willingness to Pay for Safe Drinking Water, A Case Study of Abbottabad District, The Pakistan Development Review, Vol.46, No.4, 2007.
4. P. Bajpai, L. Bhandari Results of an NSSO Survey of Urban Water Access, Implications for Policy, India Infrastructure Report, Ensuring Value for Money, Oxford University Press, New Delhi, 2004.
5. S. Phansalkar, Water, Equity and Development, International Journal of Rural Management, Vol. 3, No.1, 2007.
6. M. H. Zereh, Urban Water and Waste Water, India Infrastructure Report, Urban Infrastructure, Oxford University Press, New Delhi, 2006.
7. Shaban, A. and R. N. Sharma (2007), "Water Consumption Patterns in Domestic Households in Major Cities, Economic and Political Weekly, Vol. 42, No. 23, 2007.
8. Progress on Drinking Water, Sanitation and Hygiene, Update and SDG Baselines WHO/UNICEF 2017. Available from: www.unicef.org/publications/index_96611.html.
9. A. Prüss-Ustün, J. Bartram, T. Clasen, J. M. Colford, O. Cumming, V. Curtis, S. Bonjour, A. Dangour, De J. France, L. Fewtrell, M. Freeman, B. Gordon, P. Hunter, R. Johnston, C. Mathers, D. Mäusezahl, K.. Medlicott, M. Neira, M. Stocks, J. Wolf, S. Cairncross, Burden of disease from inadequate water, sanitation and hygiene in low- and middle-income settings, a retrospective analysis of data from 145 countries. Trop. Med. Int. Health 19 (8), 894–905,2014.
10. J. Brown, S. Cairncross, J.H.J Ensink, Water, sanitation and enteric infections in children. Arch. Dis. Child. 98 (8), 629–634, 2013.
11. Census of India, 2011.
12. Report of the expert group to review the methodology for measurement of poverty, Government of India Planning Commission June, Annexure- B, Page 28, 2014.
13. A. K. Halder, M. Kabir, Child Mortality Inequalities and Linkage with Sanitation Facilities in Bangladesh, Journal of Health, Population and Nutrition, vol. 26, No. 1, pp. 64- 73, 2008.



14. S. Bonu, H. Kim, Sanitation in India, Progress, Differentials, Correlates and Challenges, Asian Development Bank, South Asia Occasional Paper Series No. 2, 2009.
15. S. Srinivasan, S.K. Mohanty, Deprivation of Basic Amenities by Caste and Religion, Empirical Study using NFHS Data, Economic and Political Weekly, vol. 39, No. 7, pp. 728-735, 2004.
16. B. Sekhar, K. Hun, Sanitation in India Progress, Differentials, Correlates, and Challenges, Asian Development Bank.
17. District house level survey -3, , Government of India, 2007-08.
18. National Family Health survey-4, Government of India, 2015-16.